paraplegia (type III TAAA) with subsequent recovery. Median length of stay was 9 days (IQR 7–18.75).

At a median follow-up of 12 months (9–14), CT confirmed 36/37 (97%) target vessels remain patent. Sac size increased >5 mm in one patient only. There were no type I endoleaks, three type II endoleaks (one embolised, two under surveillance) and three type III endoleaks (two successfully treated percutaneously, one aneurysm ruptured 18 months after endografting and died).

**Conclusion:** In selected patients, fenestrated and branched stents appear to be a safe and effective alternative to surgery for juxtarenal and thoracoabdominal aneurysms. The complication and mortality rates are low. The long-term durability of this procedure, however, needs to be proven.

### An Emergency EVAR Service Reduces Mortality in Ruptured Abdominal Aortic Aneurysms

Sadat U., Hayes P.D., Kullar P.J., Cousins C., Varty K., Boyle J.R. Eur J Vasc Endovasc Surg 2009;37:189-93.

**Objectives:** The aim of this study was to compare all in-hospital mortality for ruptured abdominal aortic aneurysms (rAAAs) before and after the establishment of an emergency EVAR (eEVAR) service.

**Design and methods:** An eEVAR service was established in January 2006, since when all patients presenting with rAAAs have been considered for endovascular repair. Data for all rAAAs presenting between January 2006 and December 2007 was prospectively collected (Group 1). This patient group was compared to those presenting with rAAA between January 2003 and December 2005 when eEVAR was not offered at our institution (Group 2). These records had also been collected prospectively and submitted to the National Vascular Database (NVD).

**Results:** A total of 50 rAAAs (17 eEVAR, 29 open repairs, 4 palliated) presented after the introduction of eEVAR (Group 1) and 71 in the historical Group 2 of which 54 underwent open repair and 17 were palliated. The total in-hospital mortality was significantly lower in Group 1 20% (eEVAR ($n = 1$), 6%: Open ($n = 5$), 17%: palliated ($n = 4$), 100%) when compared to Group 2 54% (Open ($n = 21$), 39%: palliated ($n = 17$), 100%) ($p = 0.000001$). Furthermore similar significant differences were seen in 30-day operative mortalities between the two groups 13% in Group 1 versus 39% in Group 2 ($p = 0.0003$). In addition the proportion of patients who were palliated has significantly decreased (8% Group 1 versus 24% Group 2, $p = 0.01$).

**Conclusions:** The establishment of an eEVAR service has significantly reduced in-hospital mortality for patients presenting with ruptured abdominal aortic aneurysms.

### Balloon Angioplasty as the Primary Treatment for Failing Infrainguinal Vein Grafts

Mofidi R., Flett M., Nagy J., Ross R., Griffiths G.D., Chakraverty S., Stonebridge P.A. Eur J Vasc Endovasc Surg 2009;37:198-205.

**Background:** We sought to evaluate the role of balloon angioplasty as the primary modality in the management of vein graft stenoses.

**Methods:** Patients who underwent infrainguinal vein graft bypass from January 2002 to December 2007 were enrolled into a surveillance program. Grafts which developed critical stenoses were identified and underwent urgent angiography with a view to angioplasty of the stenotic lesion. Lesions which were deemed unsuitable for angioplasty underwent urgent surgical repair.

**Results:** Four hundred and eleven grafts were followed up for a median of 19 months (range: 2–61). Ninety-six grafts (22.6%) developed critical stenosis. Twelve grafts occluded prior to repair and one was not intervened upon electively. Eight grafts underwent primary surgical repair. Seventy-six grafts underwent 99 endovascular procedures. Technical success was achieved in 60 grafts (78.9%). Of the grafts in which technical success had not been achieved, eight underwent repeat angioplasty and three were surgically repaired. Twenty-four grafts underwent repeat angioplasty for re-stenosis with a technical success rate of 71%. No difference was observed in graft patency ($P = 0.08$) or amputation rates ($P = 0.32$) between the grafts requiring intervention to maintain patency, and grafts which did not. Smoking [OR: 2.61 (95% CI: 1.51–4.53), ($P = 0.006$)], diabetes [OR: 2.55 (95% CI: 1.49–4.35), ($P = 0.006$)], renal failure [OR: 1.89 (95% CI: 1.19–3.38), ($P = 0.040$)] and recurrent stenosis [OR: 3.22 (95% CI: 1.63–4.69), ($P < 0.001$)] were risk factors for graft occlusion.

**Conclusions:** Balloon angioplasty of failing infrainguinal vein bypass grafts is safe and can be performed with an acceptable medium term patency rate, albeit with a significant risk of re-stenosis which can be successfully treated in most patients using repeat endovascular intervention.

### Outcome of Endovenous Laser Therapy for Saphenous Reflux and Varicose Veins: Medium-Term Results Assessed by Ultrasound Surveillance

Myers K.A., Jolley D. Eur J Vasc Endovasc Surg 2009;37:239-45.

**Objective:** To assess the efficacy of endovenous laser therapy (EVLT) for treating saphenous reflux associated with varicose veins.

**Design:** Out-patient treatment by EVLT with an 810 nm laser wavelength with results assessed by ultrasound surveillance.

**Patients:** 361 patients who received EVLT for 509 incompetent saphenous veins over a five-year period.

**Methods:** EVLT was used for proximal saphenous veins and ultrasound-guided sclerotherapy (UGS) for distal saphenous veins and tributaries. Control of reflux and occlusion or obliteration of the saphenous veins was assessed by serial ultrasound studies. Univariate Kaplan–Meier life table analysis showed cumulative primary and secondary success rates, and multivariate Cox regression analysis assessed covariates that could be associated with increased risk of ultrasound failure.

**Results:** Life table analysis showed primary success at four years in 76% (95% CI 56–87%) and secondary success at four years after further treatment of recurrence by UGS in 97% (95% CI 93–99%). Cox regression analysis showed a non-significant trend towards worse primary success in male patients and worse results for older patients and limbs with clinical CEAP categories C4–6. Cox regression showed significantly worse secondary success for limbs with clinical CEAP C4–6.

**Conclusions:** EVLT effectively controls saphenous reflux particularly with ultrasound surveillance to detect early recurrence that can be treated by UGS. Modifications in technique may be required to improve the late primary success rate.